

**Work Order ID 110230**

December-17-13 9:18:49 AM

**\*110230\***

Page 1

Item ID: D350-689-021

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Dual High Back Seat Installation - Energy Attenuating Seat Compatible

Start Date: 12/17/13 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 12/17/13 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: ML5 Date: 12-17-13

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

DSI 9588

B

IIN-D350-689

B

0.00

0.00

0.00

0.00

100

**\*100\***

DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile and create labels per PPP D350-689-021 CHG005

110

**\*110\***

Packaging

Packaging

Pick Kit

Memo

ML5 14-03-18

14/3/17

DAS  
32  
9-89

(1)

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other  _____ _____ _____
--	--	---	---

**Work Order ID 110230**

December-17-13 9:18:49 AM

**\*110230\***

Page 2

Item ID: D350-689-021

Revision ID:

Item Name: Dual High Back Seat Installation - Energy Attenuating Seat Compatible

Start Date: 12/17/13 Start Qty: 1.00 \*1\*

Required Date: 12/17/13 Req'd Qty: 1.00 \*1\*

Reference:

Accept

**\*N900040100\***Setup Start **\*NS1\***Stop **\*NS2\***

Cust Item ID:

Customer:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120

QC4- 100% Inspect kits for completeness

0.00

**\*120\***

QC

Memo

0.00

Quality Control

SHIP  
14/3/26

130

Packaging

0.00

**\*130\***

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D350-689-021

Location: 049A

PPP Rev: \_\_\_\_\_

MAR 26 2014

DAS  
06  
8-89

6

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

Memo

0.00

Quality Control

MLC 14-03-26

MLC 14-03-26

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube <input type="checkbox"/></td> <td style="width:15%;">Crosstube <input type="checkbox"/></td> <td style="width:15%;">Water Jet <input type="checkbox"/></td> <td style="width:15%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other  _____ _____ _____
--	--	---	---

# Picklist Print

December-17-13 9:18:48 AM

Page 1

Work Order ID: 110230

Parent Item: D350-689-021

Parent Item Name: Dual High Back Seat Installation - Energy Attenuating Seat Compatible

Start Date: 12/17/13

Required Date: 12/17/13

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A 08-12-23 new issue DD verified by: LL 08.12.24 IPP Rev:B chg002 DD 10.02.12  
verified by:JLM IPP Rev:C chg004 DD 11.09.28 verified by:JLM IPP  
Rev:D 12.01.12 now @ CHG005 (ecn12-501) DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	DAS
D350-689-023 Floor Provisions - Energy Attenuating Seat Compatible	SWP	Manufactured	No			110	Each	0.0000	1	1	114348			06 9-89
D350-689-043 Dual High Back Seat Ass'y	DAS 27	Manufactured	No			110	Each	0.0000	1	1	110024			06 9-89
D3018-1 Seat Cushion	9-89	Manufactured	No			110	Each	2.0000	1	1	110191			06 9-89
	DAS 27 9-89			<u>Location</u> ST264A										DAS 32 9-89
					106774			2						
					88355			1						
								1						
D3019-1 Back Cushion		Manufactured	No			110	Each	2.0000	1	1	110234			DAS 32 9-89
				<u>Location</u> ST264A										9-89
					106820			2						
								2						

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>															
Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

<b>Landing Gear</b> <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	<b>General</b> <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge  <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
--	--	---	--

# DART SERVICE INSTRUCTION

## TO AMEND INSTALLATION INSTRUCTIONS IIN-D350-689 REV. B AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D350-689 REV. 1

REF. TCCA STC: SH02-33  
REF. FAA STC: SR01620NY  
REF. EASA STC: EASA.IM.R.S.01453  
REF. TCA STC: 2005S03-09

110230 MLC  
13-12-13

### 1.0 PURPOSE

For D350-689-011/-013 at CHG 006/005 and later and D350-689-021/-023 Kits at CHG 005/004 and later, the D3026-1 Channel has been replaced with the D4575-1 Beam and D4575-3 Doubler and the D3234-3 Doubler has been removed. Consequently, the installation instructions for D350-689-011/-013 at CHG 006/005 and D350-689-021/-023 at CHG 005/004 are updated per Section 2.0 of this Service Instruction. The parts list update is shown in Section 4.0 of this Service Instruction. There is a negligible change to the weight and balance.

### 2.0 INSTALLATION CHANGES FOR D350-689-013

Section 3.9, *INSTALLATION OF D350-689-013 FLOOR PROVISIONS KIT* (pages 4 and 5 of IIN-D350-689), is changed as follows:

#### Item 3.3.15 is:

If there is an existing stringer at LBL 27.33, it will need to be removed from that location. Locate D4575-1 Beam, D4575-3 Doubler, and D3032-1 Spacer as shown in Figure 1 of this Service Instruction. Transfer drill existing holes from the aircraft floor to the D4575-1 Beam, D4575-3 Doubler, and D3032-1 Spacer. Ensure 1.0" to 1.5" rivet pitch and add additional holes if required. If there is no existing stringer, locate D4575-1 Beam, D4575-3 Doubler, and D3032-1 Spacer as shown in Figure 1 of this Service Instruction and drill Ø0.128" holes on a 1.0" to 1.5" pitch.

**Note:** Drill a Ø1.00" (Ø25.4 mm) hole in the D4575-1 Beam to clear extension tube of collective and cutout as required for clearance of collective opening and fwd bulkhead as shown in Figure 3 of this Service Instruction.

#### Item 3.3.15 was:

If there is an existing stringer at LBL 27.33, it will need to be removed from that location. Locate D3026-1 Channel as shown in Figure 4 and transfer existing holes from the aircraft floor to the D3026-1 Channel & D3032-1 Spacer. Ensure 1.0" to 1.5" rivet pitch and add additional holes if required. If there is no existing stringer, locate D3026-1 Channel & D3032-1 Spacer as shown in Figure 4 and drill Ø0.128" holes on a 1.0" to 1.5" pitch.

#### Item 3.3.17 is:

Counter sink holes in the D3032-1 Spacer for MS20426AD4 rivets. Install D4575-1 Beam, D4575-3 Doubler, and D3032-1 Spacer to floor using MS20426AD4 rivets.

#### Item 3.3.17 was:

Counter sink holes in the D3032-1 Spacer for MS20426AD4 rivets. Install D3026-1 Channel and D3032-1 Spacer using MS20426AD4 rivets.

#### Item 3.3.22 is:

Rivet D3234-1 Doubler to D3025-1 Beam as shown in Figure 7 using MS20470AD4 rivets. Continue at step 3.3.25.

#### Item 3.3.22 was:

Rivet D3234-1 Doubler to D3025-1 Beam and D3234-3 Doubler to D3026-1 Channel as shown in Figure 7 using MS20470AD4 rivets. Continue at step 3.2.25.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: D. Shepherd  
D. SHEPHERD (DE # 02)

DATE: 12.11.09  
CERT. NO.: SH02-33  
ISSUE NO.: 1

B	CHANGES TO -013 KIT INSTALLATION. REF: CIR12-12.	MB	12.11.09
A	NEW ISSUE	MB	11.12.22
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.	N/A		
APPROVED			
DE APPR.			
DATE	12.11.09		
<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. <b>DSI 9588</b>		REV. B SHEET 1 OF 6	
TITLE <b>INSTALLATION CHANGE</b>		SCALE NTS	
COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

### 3.0 INSTALLATION CHANGES FOR D350-689-023

Section 3.9, *INSTALLATION OF D350-689-023 ENERGY ATTENUATING FLOOR PROVISIONS KIT* (pages 8 and 9 of IIN-D350-689), is changed as follows:

**Item 3.9.8 is:**

If there is an existing stringer at LBL 27.33, it will need to be removed from that location. Locate D4575-1 Beam and D4575-3 Doubler as shown in Figure 2 of this Service Instruction. Transfer drill existing holes from the aircraft floor to the D4575-1 Beam and D4575-3 Doubler. Ensure 1.0" to 1.5" rivet pitch and add additional holes if required. If there is no existing stringer, locate D4575-1 Beam and D4575-3 Doubler as shown in Figure 1 of this Service Instruction and drill Ø0.128" holes on a 1.0" to 1.5" pitch.

**Note:** Drill a Ø1.00" (Ø25.4 mm) hole in the D4575-1 Beam to clear extension tube of collective and cutout as required for clearance of collective opening and fwd bulkhead as shown in Figure 3 of this Service Instruction.

**Item 3.9.8 was:**

If there is an existing stringer at LBL 27.33, it will need to be removed from that location. Locate D3026-1 Channel as shown in Figure 4 and transfer existing holes from the aircraft floor to the D3026-1 Channel. Ensure 1.0" to 1.5" rivet pitch and add additional holes if required. If there is no existing stringer, locate D3026-1 Channel as shown in Figure 4 and drill Ø0.128" holes on a 1.0" to 1.5" pitch.

**Item 3.9.10 is:**

Attach D4575-1 Beam and D4575-3 Doubler to floor using qty (14) MS20426AD4 rivets.

**Item 3.9.10 was:**

Attach D4575-1 Channel to floor using qty (14) MS20426AD4 rivets.

**Item 3.9.12 is no longer applicable:**

~~Rivet D3234-3 Doubler to D3026-1 Channel as shown in Figure 7 using MS20470AD4 rivets.~~

**Item 3.9.12 was:**

Rivet D3234-3 Doubler to D3026-1 Channel as shown in Figure 7 using MS20470AD4 rivets.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

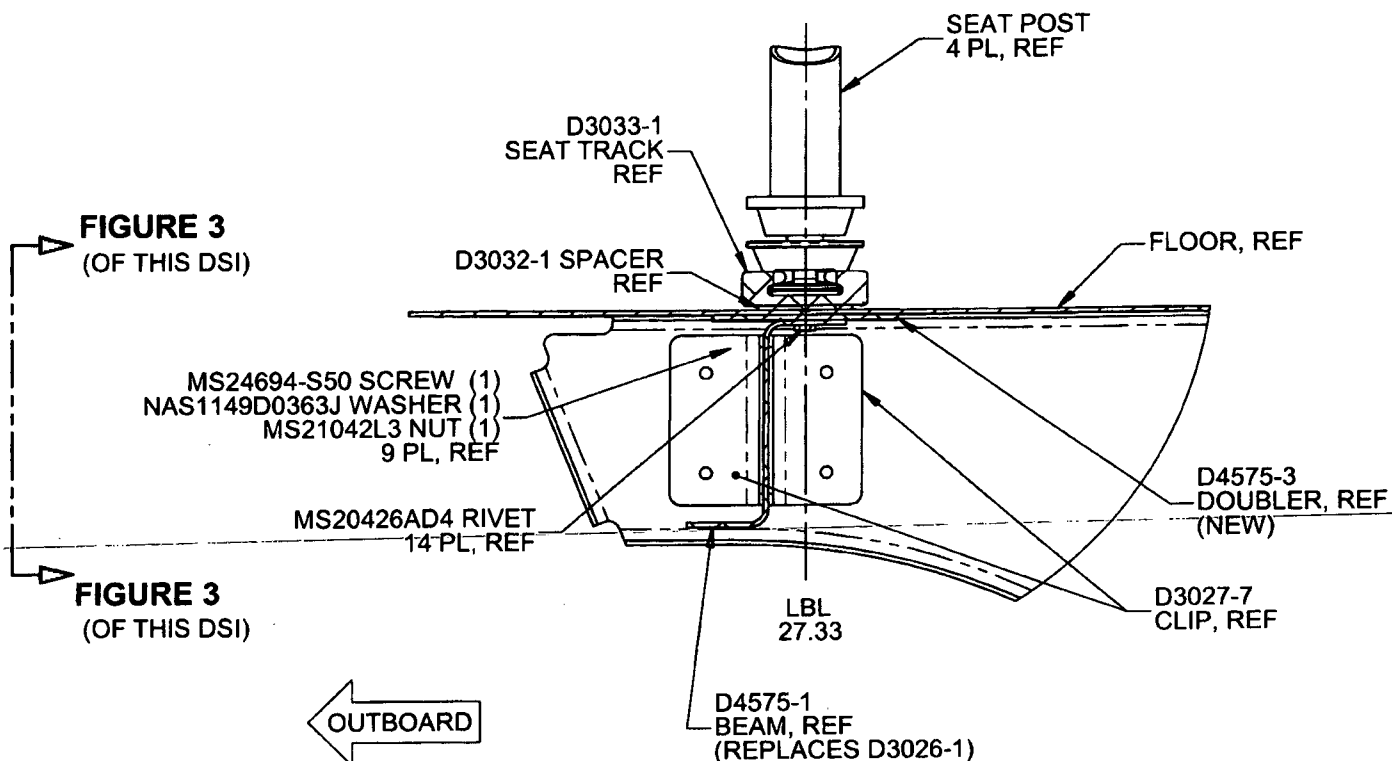
BY:

D. SHEPHERD (DE # 02)

DATE: 12.11.09  
CERT. NO.: SH02-33  
ISSUE NO.: 1

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9588	SHEET 2 OF 6
APPROVED		TITLE	SCALE
DE APPR.		INSTALLATION CHANGE	NTS
DATE	12.11.09	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			





**CROSS SECTION VIEW F-F/M-M: From Figures 5 and 7 (IIN-D350-689)**  
**CROSS SECTION VIEW F-F/M-M: From Figures 25-5 and 25-7 (ICA-D350-689)**

**FIGURE 1: UPDATES TO CROSS SECTIONS F-F AND M-M**

With reference to Figures 5 and 7 of IIN-D350-689  
 (Figures 25-5 and 25-7 of ICA-D350-689)

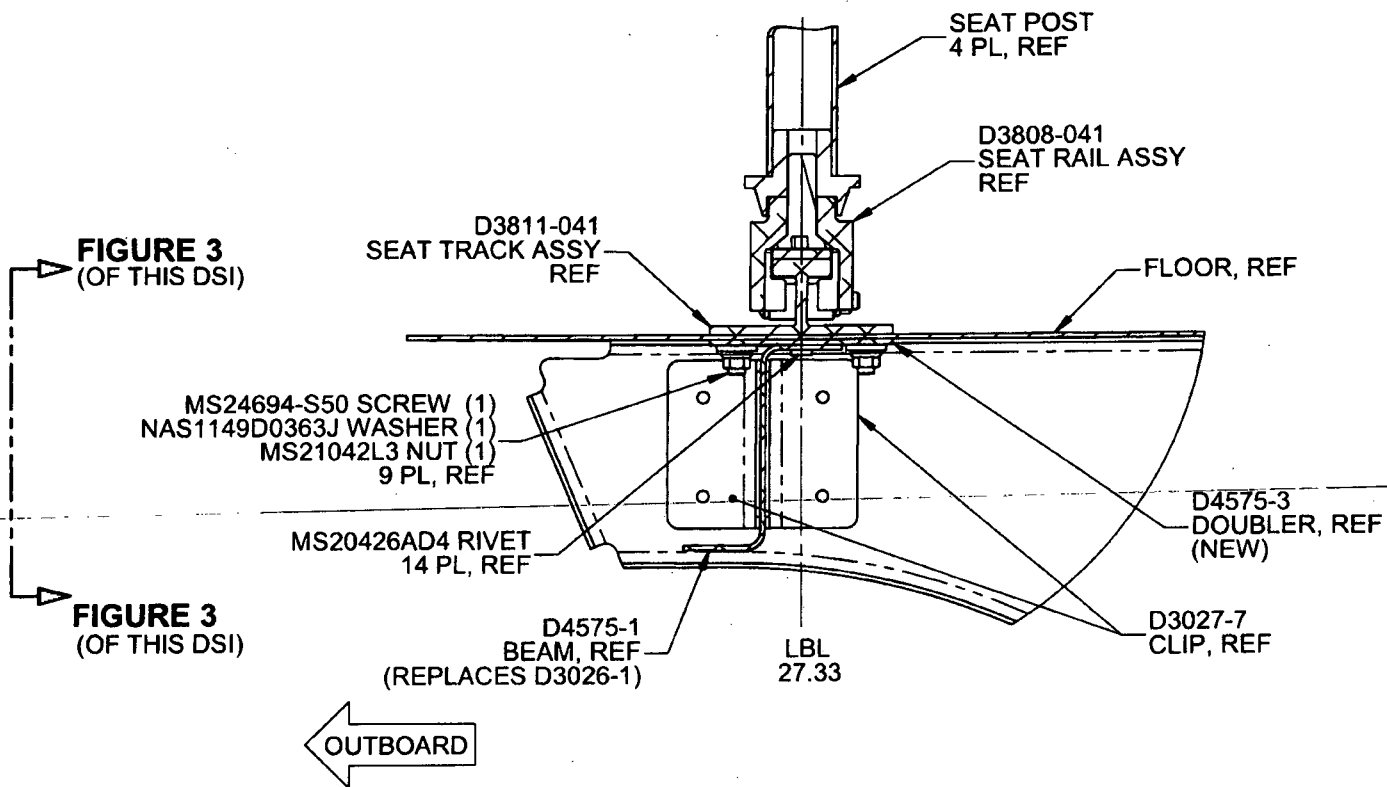
CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 12.11.09  
CERT. NO.: SH02-33  
ISSUE NO.: 1

DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	<b>DSI 9588</b>	SHEET 3 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>INSTALLATION CHANGE</b>	NTS
DATE	12.11.09	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



**FIGURE 21: Cross Section View T-T from Figure 19 (IIN-D350-689)**  
**FIGURE 25-21: Cross Section View T-T from Figure 25-19 (ICA-D350-689)**

**FIGURE 2: UPDATES TO FIGURE 21 (IIN-D350-689) AND 25-21 (ICA-D350-689)**  
 With reference to Figures 19 and 20 of IIN-D350-689  
 (Figures 25-19 and 25-20 of ICA-D350-689)

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

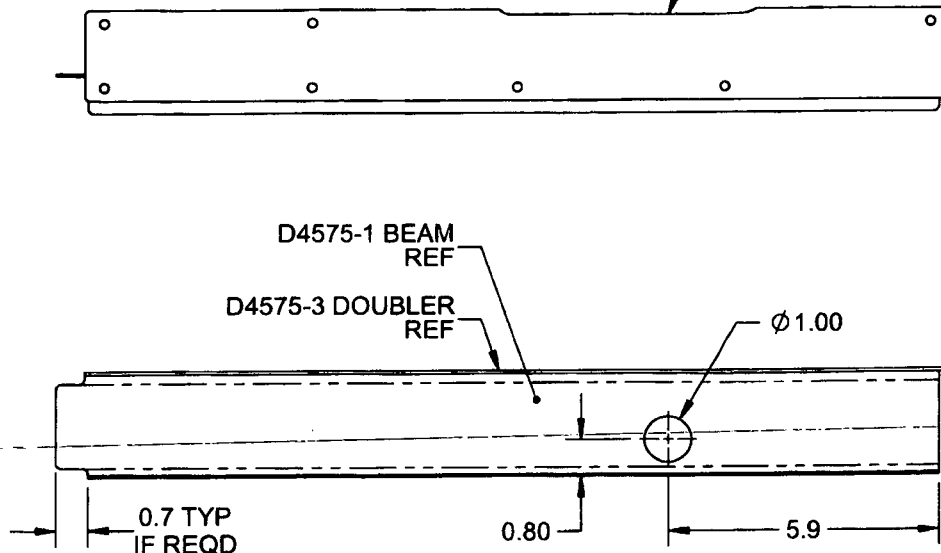
APPROVED

BY: *D. Shepherd*  
D. SHEPHERD (DE # 02)

DATE: 12.11.09  
CERT. NO.: SH02-33  
ISSUE NO.: 1

DESIGN	<i>B</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>B</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>B</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9588	SHEET 4 OF 6
APPROVED	<i>B</i>	TITLE	SCALE
DE APPR.	<i>B</i>	INSTALLATION CHANGE	NTS
DATE	12.11.09	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

TRANSFER EXISTING CUTOUT  
FROM AIRCRAFT FLOOR A/R TO  
D4575-1/-3 FOR COLLECTIVE OPENING



**FIGURE 3: RELIEFS ON D4575-1/-3**  
(ONLY D4575-1/-3 SHOWN FOR CLARITY)  
VIEW LOOKING INBOARD

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY:

D. SHEPHERD (DE # 02)

DATE: 12.11.09  
CERT. NO.: SH02-33  
ISSUE NO.: 1

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9588	SHEET 5 OF 6
APPROVED		TITLE	SCALE
DE APPR.		INSTALLATION CHANGE	NTS
DATE	12.11.09	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

#### 4.0 PARTS LIST CHANGE

The parts list of D350-689-021/-023 at CHG 005/004 or later is amended as follows:

#### 5. PARTS LIST (IIN-D350-689) 25.10 PARTS LIST (ICA-D350-689)

IS:

Qty -011	Qty -013	Qty -015	Qty -017	Qty -019	Qty -021	Qty -023	Qty -041	Qty -043	Part Number	Description
X									D350-689-011	DUAL HIGH BACK SEAT INSTALLATION, LH
1	X								D350-689-013	FLOOR PROVISIONS KIT
		X							D350-689-015	SEAT MODIFICATION KIT
			X						D350-689-017	SHOULDER HARNESS KIT
				X					D350-689-019	CONTROL GUARD KIT
					X				D350-689-021	DUAL HIGH BACK SEAT INSTALLATION, LH
					1	X			D350-689-023	ENERGY ATTENUATING FLOOR PROVISIONS KIT
1							X		D350-689-041	DUAL HIGH BACK SEAT ASSEMBLY
					1			X	D350-689-043	DUAL HIGH BACK SEAT ASSEMBLY
									D3026-1	CHANNEL (REMOVED)
									D3234-3	DOUBLER (REMOVED)
	1					1			D4575-1	BEAM (REPLACES D3026-1)
	1					1			D4575-3	DOUBLER (NEW)

WAS:

Qty -011	Qty -013	Qty -015	Qty -017	Qty -019	Qty -021	Qty -023	Qty -041	Qty -043	Part Number	Description
X									D350-689-011	DUAL HIGH BACK SEAT INSTALLATION, LH
1	X								D350-689-013	FLOOR PROVISIONS KIT
		X							D350-689-015	SEAT MODIFICATION KIT
			X						D350-689-017	SHOULDER HARNESS KIT
				X					D350-689-019	CONTROL GUARD KIT
					X				D350-689-021	DUAL HIGH BACK SEAT INSTALLATION, LH
					1	X			D350-689-023	ENERGY ATTENUATING FLOOR PROVISIONS KIT
1							X		D350-689-041	DUAL HIGH BACK SEAT ASSEMBLY
					1			X	D350-689-043	DUAL HIGH BACK SEAT ASSEMBLY
	1					1			D3026-1	CHANNEL
	1					1			D3234-3	DOUBLER

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED

BY: *D. Shepherd*  
D. SHEPHERD (DE # 02)

DATE: 12.11.09  
CERT. NO.: SH02-33  
ISSUE NO.: 1

DESIGN	<i>13</i>	<b>DART AEROSPACE LTD</b>	
DRAWN	<i>13</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>14</i>	DRAWING NO.	REV. B
MFG. APPR.	N/A	DSI 9588	SHEET 6 OF 6
APPROVED	<i>14</i>	TITLE	SCALE
DE APPR.	<i>14</i>	INSTALLATION CHANGE	NTS
DATE	12.11.09	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

**4. WEIGHT AND BALANCE**

The following weight and balance information is for the Dart Dual High Back Seat Installation. The weight and balance of the parts that are removed from the aircraft to perform this installation are the responsibility of the installer.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D350-689-011 Dual High Back Seat Installation, Fwd Position	27.6 lb 12.5 kg	-18.2 in -0.46 m	-502 in-lb -5.8 m-kg	60.7 in 1.54 m	1675 in-lb 19.3 m-kg
D350-689-013 Floor Provisions Kit, Fwd Position	2.0 lb 0.9 kg	-18.2 in -0.46 m	-36 in-lb -0.4 m-kg	60.7 in 1.54 m	121 in-lb 1.4 m-kg
D350-689-011 Dual High Back Seat Installation, Aft Position	28.1 lb 12.7 kg	-18.2 in -0.46 m	-511 in-lb -5.8 m-kg	63.7 in 1.62 m	1790 in-lb 20.57 m-kg
D350-689-013 Floor Provisions Kit, Aft Position	3.1 lb 1.4 kg	-18.2 in -0.46 m	-56 in-lb -0.6 m-kg	62.2 in 1.58 m	193 in-lb 2.2 m-kg
D350-689-015 Seat Modification Kit	1.0 lb 0.5 kg	-17.2 in -0.44 m	-17 in-lb -0.22 m-kg	60.7 in 1.54 m	61 in-lb 0.77 m-kg
D350-689-017 Shoulder Harness, Fwd Position	4.4 lb 2.00 kg	-18.2 in -0.46 m	-80.1 in-lb -0.92 m-kg	60.7 in 1.54 m	267 in-lb 3.08 m-kg
D350-689-017 Shoulder Harness, Aft Position	4.4 lb 2.00 kg	-18.2 in -0.46 m	-80.1 in-lb -0.92 m-kg	64.7 in 1.64 m	285 in-lb 3.28 m-kg
D350-689-019 Control Guard, Fwd Position	0.5 lb 0.23 kg	-9.0 in -0.23 m	-4.5 in-lb -0.05 m-kg	60.7 in 1.54 m	30 in-lb 0.35 m-kg
D350-689-019 Control Guard, Aft Position	0.5 lb 0.23 kg	-9.0 in -0.23 m	-4.5 in-lb -0.05 m-kg	64.7 in 1.64 m	32 in-lb 0.38 m-kg
D350-689-021 Dual High Seat Back Installation, LH Fwd Position	29.2 lb 13.2 kg	-18.2 in -0.46 m	-531 in-lb -6.1 m-kg	60.7 in 1.54 m	1772 in-lb 20.3 m-kg
D350-689-021 Dual High Seat Back Installation, LH Aft Position	29.2 lb 13.2 kg	-18.2 in -0.46 m	-531 in-lb -6.1 m-kg	64.7 in 1.64 m	1889 in-lb 21.6 m-kg
D350-689-023 Energy Attenuating Floor Provisions Kit	2.5 lb 1.1 kg	-18.2 in -0.46 m	-46 in-lb -0.5 m-kg	62.2 in 1.58 m	156 in-lb 1.7 m-kg

**5. PARTS LIST**

Qty -011	Qty -013	Qty -015	Qty -017	Qty -019	Qty -021	Qty -023	Qty -041	Qty -043	Part Number	Description
X									D350-689-011	DUAL HIGH BACK SEAT INSTALLATION, LH
1	X								D350-689-013	FLOOR PROVISIONS KIT
		X							D350-689-015	SEAT MODIFICATION KIT
			X						D350-689-017	SHOULDER HARNESS KIT
				X					D350-689-019	CONTROL GUARD KIT
					X				D350-689-021	DUAL HIGH BACK SEAT INSTALLATION, LH
					1	X			D350-689-023	ENERGY ATTENUATING FLOOR PROVISIONS KIT
1							X		D350-689-041	DUAL HIGH BACK SEAT ASSEMBLY
								X	D350-689-043	DUAL HIGH BACK SEAT ASSEMBLY
							2	2	D3016-041	SEAT FRAME ASSEMBLY
							1	1	D3017-041	BACK FRAME ASSEMBLY
1					1				D3018-1	SEAT CUSHION
1									D3019-1	BACK CUSHION
							1	1	D3021-041	TUBE ASSEMBLY
							1	1	D3022-1	SEAT PAN
							1	1	D3023-1	BACK PANEL
							3	3	D3024-1	SPACER
	1								D3025-1	BEAM

• COPYRIGHT © 2011 BY DART AEROSPACE LTD •  
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: B  
Date: 11.07.22